Saskatchewan
Agriculture
and Food

Saskatchewan Conservation Cover Program

Introduction

As part of the 2000 provincial budget, the Saskatchewan government announced its intention to fund a program initiative, starting spring 2001, to encourage the conversion of certain farmlands from annual cropping to perennial cover for livestock forage or other uses. No program details were announced. Rather, there was a commitment to consult with stakeholder groups in designing the new program. The purpose of this document is to discuss potential options and to ask for input on program design and implementation.

In approaching this topic, many will consider the experience gained through the federally funded Permanent Cover Program (PCP), available from 1989 to 1992. This national program encouraged soil conservation by providing incentives for long term conversion of marginal and fragile cropland to perennial forages. In Saskatchewan, PCP was fully subscribed and popular with producers. It resulted in the long-term conversion of about 500,000 acres of marginal cropland. There has been considerable interest in continued programming of this type and it is hoped that the federal government may consider funding a companion program to the new provincial initiative.

The new provincial cover program could be structured to advance a number of environmental and economic objectives including: soil conservation; protection of rural water quality; enhancement of fish and wildlife habitat; reduction of greenhouse gas emissions; carbon sequestration in agricultural soils; and increased forage and pasture supplies for Saskatchewan's expanding livestock sector. This broad range of potential benefits may also attract other funding partners

Initial consultations with a group of major stakeholders indicated that they would want a program that:

- has a lasting positive effect on soil and water resources and other environmentally sensitive areas;
- complies with international trade agreements;
- is efficiently administered; and
- complements other related programming within Saskatchewan.

The program will have a finite budget. With the expected high level of producer interest, it may be necessary to direct funding to specific priority activities or to certain land classifications. This will help to ensure that program resources are used to maximize environmental and economic benefits and to meet the interests of agricultural producers, rural communities and other stakeholders.

Background

Approximately 46 million of Saskatchewan's 65 million agricultural acres are used for a variety of annual crops and summerfallow. Over the past century or so, all of this area was converted from native prairie, forested lands and wetlands. The breaking of new lands has been continuing, as over three million additional acres have been brought into cultivation since 1976.

Much of this area is prime farmland that was broken when conditions supported crop expansion. However, with increasing input and grain transportation costs and fluctuating market conditions, some lands have proven to be economically marginal. Lands with productivity limitations such as soil texture and quality, stoniness, slope, drainage, or salinity, cost as much to farm as productive soils, but have consistently lower yields. The breaking and annual tillage of physically marginal lands has led to severe erosion and in some cases, has harmed water quality and sensitive wildlife and fish habitat. These impacts could be reduced by converting fragile lands from annual cropping to a permanent vegetation cover and through use of perennials in buffer strips between croplands and sensitive riparian areas.

Saskatchewan also has approximately 13 million acres of native rangeland, three million acres of tame forage utilized as pasture, and approximately 3.4 million acres of tame hay. With low grain prices through most of the past decade and an expanding livestock sector, significant areas are being seeded to forages each year to meet the increasing need for feed and pasture.

Saskatchewan's livestock industry has grown and diversified over the past decade due to favorable market conditions. The provincial cattle herd has expanded

from 2.1 million head in 1988 to 2.7 million head in 1998. There has also been significant growth in numbers of farmed elk, white-tailed deer, bison and other specialized livestock.

While livestock grazing generally represents a lower intensity of land use than annual cropping, environmental damage can be caused by overgrazing, livestock entering watercourses, poorly located wintering facilities, or improper manure management practices. There are also economic reasons for installing remote watering systems for livestock as researchers have shown that higher quality drinking water leads to increased weight gain and reduced health problems.

There is strong evidence that human activities, particularly the burning of fossil fuels, are having an effect on global climatic conditions. Canada has made international commitments to reduce its emissions of carbon dioxide and other greenhouse gases to the atmosphere, creating both challenges and opportunities for agricultural producers. Agricultural production systems based on perennial cover have generally more favorable greenhouse gas balances than annual cropping systems.

Integration with Other Programs

The program could potentially interface with other programs with similar goals. Organizations such as the Prairie Farm Rehabilitation Administration (PFRA), Saskatchewan Wetland Conservation Corporation, and Ducks Unlimited Canada have programs that utilize establishment of perennial cover to enhance habitat and reduce site degradation.

Potential Program Components

Objectives that could be encompassed in this program include; soil conservation; protecting water quality; conserving biodiversity; reducing greenhouse gas emissions; improving habitat, and enhancing the province's forage base. While these are all worthwhile objectives, stakeholder input is needed to define priorities and thereby to advise on program design.

a) Soil Conservation

It is estimated that there are up to two million acres of environmentally and economically unsustainable cultivated land in Saskatchewan. Continued annual tillage of these lands damages the environment and may be economically detrimental to producers. Program eligibility could be restricted to lands that are fragile or have low productivity soils. Their conversion to perennial forages would improve soil health, reduce wind and water erosion, and remove some of the lowest productivity lands from annual cropping. The use of long-lived forage species would reduce the need for stand re-establishment and thereby reduce the negative effects of tillage on soil quality.

b) Water Quality/Riparian Area Management

The availability of clean, safe water is critical for household use, irrigation and livestock watering. The public is becoming increasingly aware of the need to protect the quality and safety of drinking water.

The program could provide incentives to prevent or reduce any negative impacts (sedimentation, nutrients, pathogens, chemicals) of crop or livestock production on surface and groundwater quality. Sensitive areas such as watercourses and associated riparian areas could be protected by planting grass, shrub or tree buffer strips along adjacent fields, fencing to limit livestock access to shorelines and dugouts, planting of grassed waterways, and proper manure management within the larger drainage basin. The program priority could be to protect water quality through cost-sharing the seeding of perennial buffer strips, construction of fences and remote watering systems and development of watershed management plans.

The use of forages in short-term rotation with annual crops for hay, pasture or seed production is also a beneficial practice that helps to protect soil and water quality. Grasses and legumes in rotation are also useful for breaking weed and disease cycles and for reducing crop input costs.

c) Forage Resources

Saskatchewan's livestock sector is poised for a significant expansion, due to buoyant cattle prices and increased potential for backgrounding feeders and finishing cattle. There will be need for expanded pasture resources and forage supplies to feed increased cattle numbers and for cattle remaining in Saskatchewan for a longer part of their feeding period.

Due to reduced profitability in the grains sector in recent years, producers have used their own resources to seed significant areas to forages. A program that directly subsidizes the seeding of additional forages or cattle industry expansion may be subject to international trade actions. However, "green" or "multifunctional" programs could be used to encourage land use change that reduces agriculture's environmental impact, especially on sensitive areas. This type of programming will be less vulnerable to trade challenges and likely still lead to increased feed and pasture supplies.

d) Climate Change/Carbon Sequestering

Crop production relies on significant inputs of machinery, chemical fertilizers, pesticides and energy for production and transportation. These all involve the combustion of fossil fuels, releasing greenhouse gases such as carbon dioxide to the atmosphere. As well, cultivation leads to soil carbon becoming more volatile and vulnerable to loss to the atmosphere. Lands in perennial forage cover are less dependant on inputs derived from fossil fuels and soil carbon levels can be increased by using appropriate management techniques. Greenhouse gases are also emitted by livestock directly and from livestock manure. In changing land use from cropland to livestock use, the net effect on greenhouse gas emissions can vary, depending on management practices and intensities of livestock production.

The program could be directed to meet the challenges and opportunities presented by the emerging climate change issue. A program focussed on reducing net emissions might include: conversion of lands to forages, reduced tillage, utilization of forage species with extensive root systems; improved manure management, forage stand management to encourage accumulation of root mass; planting of tree shelterbelts; and increasing livestock grazing and feed efficiencies. For the soil carbon pool to be maintained and potential carbon credits to be generated, the converted lands might need to remain under permanent cover indefinitely.

e) Wildlife Habitat Improvement

The program could focus on conserving the province's natural biodiversity and enhancing habitat areas of importance to species at risk. It could target critical habitat areas and select seed mixes or cover types that would favor certain wildlife species. Management strategies would be designed to benefit the species in question. The program might restrict the use of invasive forage species such as crested wheat grass and smooth bromegrass in sensitive areas. Stewardship initiatives under federal endangered species legislation might be available to enhance the program if it were directed to habitat improvements.

Saskatchewan Conservation Cover Program

Questionnaire

Please complete the following questions that deal with the potential goals and design of the new program. Space has been allocated for comments. Please recognize that overall program funding will be limited and the challenge will be to direct funding to activities that maximize overall benefits.

You can request an electronic version of the questionnaire by phoning (306) 787-6586, or it can be downloaded from the SAF internet site **www.agr.gov.sk.ca**. Use as much space as desired for responses.

1. A well-designed conservation cover program will achieve several objectives. However, it should be designed to focus on the area(s) of highest priority. Please rank the following five objectives, with #1 as the highest priority and #5 as the lowest. If desired, also suggest additional objectives in the comment section.

   a) soil conservation; _____
   b) protecting/improving water quality; _____
   c) enhancing wildlife/fish habitat; _____
   d) reducing greenhouse gas emissions; _____
   e) forage and livestock expansion; _____
   f) other - comments: _____
   _____
   _____
   _____

2. Several ideas have been suggested for implementing a conservation cover program. Please rank the following approaches in order of preference (highest as #1 and lowest as #4). Add any other suggestions in the comments section.

   a) per acre incentive to help offset forage seeding costs; _____
   b) assist with infrastructure costs (fencing/water development); _____
   c) property tax rebate to reward conservation practices; _____
   d) fund research and technology transfer; _____
   e) other – comments _____
   _____
   _____
   _____

3. If the program includes an incentive to help offset forage seeding costs, should eligibility be restricted to the following:
   a) only Saskatchewan Crop Insurance Corporation soil classes K or lower? yes___ no ___
   b) include lands with specific productivity problems? yes___ no ___
   c) all land classes should be eligible?
   yes___ no ___
   d) assist with seeding buffer strips on cropland adjacent to watercourses? yes___ no ___
   e) other – please specify _____
   _____
   _____
   _____

4. Assuming that one of the program objectives would be to encourage the conversion of marginal cropland to forages, should lands be considered ineligible if:
   a) they were recently broken (e.g. from native prairie) yes ___ no ___
   b) they were recently converted from tame forages?
   yes ___ no ___
   c) they were enrolled in the Permanent Cover Program (PCP)? yes ___ no ___
   d) other – please specify _____
   _____
   _____
   _____

5. If the program includes an incentive to help offset forage seeding costs, which future uses of enrolled lands should be acceptable?
   a) haying yes ___ no ___
   b) grazing yes ___ no ___
   c) seed production yes ___ no ___
   d) no agricultural use allowed yes ___ no ___
   (land idled or managed for other purposes)

   Comments: _____
   _____
   _____
   _____

6. Given limited program funding, should acreage incentive payments for individual applications be limited to:
   a) 40 acres ____
   b) 80 acres ____
   c) 160 acres ____
   d) other - specify _____
   e) no restriction

   Comments: _____
   _____
   _____
   _____

7. How long should program participants commit to maintain enrolled lands in perennial cover?
   a) 1 year ____
   b) 3 years ____
   c) 5 years ____
   d) 10 years or more ____
   e) no restrictions ____

   Comments: _____
   _____
   _____
   _____

8. Assuming the program should not be responsible for spreading of noxious weeds in seed supplies, what minimum level of forage seed quality should be required under the program?
   a) certified ____
   b) Canada No.1 ____
   c) seed analysis certificate required ____
   d) no restriction ____

   Comments: _____
   _____
   _____
   _____

9. Should there be any program restrictions on forage species seeded? e.g. restrict invasive species (smooth bromegrass, crested wheatgrass) from sensitive areas. yes ___ no ___

   Comments: _____
   _____
   _____
   _____

10. Should the program be flexible enough to include incentives for tree planting (field shelterbelts, agroforestry) along with the incentives for perennial forages? yes ___ no ___

    Comments: _____
    _____
    _____
    _____

11. The program could be limited to promoting the conversion of marginal cropland to perennial for ages, or it might also include assistance for infrastructure costs such as fencing or water development? Should program funding be directed to:
    a) protect water quality and riparian areas by restricting livestock access? yes __ no ___
    b) improve pasture management through cross-fencing/water development? yes __ no ___
    c) other? – specify _____
    _____
    _____
    _____

12. If the program were to include provision of services, should funding be directed to:
a) farm planning yes __ no ___
b) extension - forage establishment/management yes __ no ___
c) extension – grazing management yes __ no ___
d) research yes __ no ___
e) other – specify _____
_____
_____
_____

13. Assuming that program demand exceeds available funds, how should applications be selected?
a) first come, first served;
b) applicants that have already converted some lands using own resources;
c) prorate eligible funding
d) other criteria - specify_____
_____
_____

14. Should applicants be required to include a plan (for forage establishment, management, maintenance, use, marketing) as part of the application?
yes___ no ___

Comments: _____
_____
_____
_____

15. Over how many years should the program be made available to applicants?
a) only 2001; ____
b) three years; ____
c) five years; ____
d) other comments: _____
_____
_____
_____

16. Should regional variations in grain transportation costs be a factor in setting program priorities?
a) yes
b) no

Comments: _____
_____
_____
_____

17. The degree to which producers share costs with the program on a project by project basis would determine the numbers of projects that could be funded. What level of project costs should the producers share?
a) none
b) 25%. ____
c) 50%. ____
d) 75%. ____
e) other ____ specify _____
_____
_____
_____

18. Other comments regarding this program?
_____
_____
_____
_____

Your name _____

Organization represented _____

Please return your response to this questionnaire by
October 31, 2000
to:
Conservation Cover Program Consultations
Policy and Program Development Branch
Saskatchewan Agriculture and Food
Room 302, 3085 Albert Street
REGINA, Saskatchewan, S4S 0B1

For more information on this process, please call (306) 787-6586

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